

### III. REMARKS

- STATUS OF THE CLAIMS

Claims 1-7 were pending during the issuance of the Office Action. Claims 1 is amended; Claims 2 and 8-16 is cancelled without prejudice. The amended Claim 1 incorporates the limitation of Claim 2. Claims 17 through 19 have been newly added. Applicant asserts that the amendments do not introduce new matter. Support for the amendments to Claim 1 may be found throughout the instant specification and especially at pages 6-7 and Figure 2 and 2a.

- REJECTION UNDER 35 U.S.C. §102

- *Examiner's Position:*

The Examiner, page 3, at paragraph 9 of the Office Action, has rejected claims 1 and 5 under 35 U.S.C. §102(b) as being anticipated U.S. Patent No. 3,355,098 to Farr.

In the Examiner's opinion, the cited reference discloses a fractionator having a head surface at a forward end of the head, the head being configured to form a slideable seal with the inside surface of a sample tube (column 1, lines 61-65); a collection port disposed forward of the head surface (column 1, lines 67-70); and a fluid passageway configured and arranged to allow fluid transport from the sample tube to sample receptacles (column 2, lines 10-13 and 25-26). Furthermore, regarding claim 5, the Examiner alleges that the Farr reference discloses a fractionator wherein the collection port is placed off-center of the head (Figure 1, ref. no. 16 ).

- Applicant's Response

Applicant respectfully disagrees. Applicant traverses the rejection at least in part where the cited reference does not show each and every element of the instant as presently amended. On the contrary, the cited reference neither discloses, claims, nor even remotely suggests the subject matter of claim 1 under the statute. In particular, amended claim 1 is directed to a fractionator for collecting at least a portion of a sample disposed in a sample tube, the fractionator comprising a head having a head surface at a forward end of the head and a shaft on the back end, the head being configured to form a slideable seat with the inside surface of a sample tube; a collection port disposed forward of the head surface; a fluid passageway in fluid communication with the collection port, the fluid passageway being configured and arranged to allow fluid transport generated from the sample tube to a sample receptacle; said fluid transport being generated by a force on said shaft from said back end; said head surface at the head forward end being positioned inside the sample tube; and a plenum space defined forward of the head and bounded, at least in part, by the head surface, the collection port, and the inside surface of said sample tube. Support for these features can be found in the application at paragraph [0017] on page 4 and also on Fig. 1.

In the first instance, the referenced *hollow* plunger tube is distinctly different from the shaft claimed in independent claim 1, and has a different utility, i.e., to contain the “plastic flexible small bore or capillary tube 15” inside the hollow plunger. Moreover, the presently claimed configuration provides a plenum space during downward force application defined as being forward of the head and bounded at least in part, by the head surface, the collection port, and the inner surface of the sample tube. In as much as claim 5 is dependent from allowable claim 1, it is also believed in condition for allowance.

*Examiner's Position:*

Claims 1, 2, 6 and 7 are rejected under 35 USC 102 (b) as being anticipated by Pelecq (FR 2,537,092). Specifically, Examiner alleges that regarding claim 1 the reference to Pelecq discloses a slideable seal, sample tube and collection port. With regard to claims 2, 6 and 7, Examiner alleges Pelecq discloses a plenum, center collection port configured to isolate the head surface from a sample during collection.

Applicant's Response

Applicant respectfully disagrees and traverses Examiner's alleged reasons for rejecting the claims. The cited reference neither discloses, claims nor suggests the instant invention as presently claimed. The amendment incorporates the limitations of Claim 2 into Claim 1, as presented above, thereby including a "plenum" effect in Claim 1. Farr fails to disclose or claim a plenum. Amended Claim 1 further defines "...said fluid transport being generated by a force on said shaft from said back end;..." Thus pressurization of the plenum is defined as external force (i.e. the plunger of figure 2a and b) rather than an internal force (or aspirating or pumping force). Pelecq is completely silent as to an "external pressure" added force to cause movement of the fluid. In contrast, the referenced force is internal, diminishing (sucking) pressure or a force generated by the gas dissolved in the liquid. Alternatively, Pelecq (translated from French) says the liquid " is propelled out of the container by the intermediary action of a gas dissolved in the liquid ". As amended, the instant Claim 1 is limited to an external, not internal force to drive the segregated liquid layer.

Contrary to Examiner's statement in paragraph "10" of the office action, Pelecq is also silent on the use of "a piston ring type slideable seal." The Pelecq seal is a flexible ring closure for the top of a liquid holding vessel, but not a "slideable seal." attached to the actual

head portion of the downward plunger. Thus Pelecq discloses and claims a stopper **8** (in figure 1, **18** in figure 2) that seals the vessel in one or top position. To seal in a second position collar **9** must be unscrewed from fixed collar **17** thus decompressing the stack of elastomeric washers **18** to shrink the diameter of **18** away from the inner wall of the beverage container **3** to break the seal. The stopper is then moved to a second position in the neck of the container **3** where the collar **9** is screwed on the fixed collar **19** to compress **18** and reseal the bottle. In sum, the cited reference discloses a moveable discontinuous seal needed for a beverage bottle where the walls are not parallel **3** but not a continuous seal as in the slideable seal of the instant invention as claimed.

In view of the disclosure of Pelecq, Applicant asserts that Pelecq fails to disclose a slideable seal. Pelecq also fails to disclose expelling the fluid by an externally pressurized plenum. Since the reference is completely silent on the fundamental design and critical features and elements of the claimed invention, Applicant requests withdrawal of the rejection of Claim 1. Since the rest of the claims depend from allowable Claim 1, Applicant believes the rejections of claims 3-7 moot and respectfully requests the withdrawal thereof.

- REJECTION UNDER 35 U.S.C. §103

- Examiner's Position

Claims 3 and 4 are rejected under 35 USC 103(a) as being *prima facie* obvious over Pelecq (FR 2537092). In particular, the Examiner alleges that the cited reference to Pelecq discloses a variety of cross-sectional dimensions and diameters which relative ratios would have been obvious to one of ordinary skill in the art to allow varying flow rates.

Applicant's Response

Applicant disagrees. On the contrary, the ratio range has been selected on the basis of the instant nonobvious observation that excessively low ratio or an excessively high ratio between the cross-sections of the centrifuge tube and the port tubing would diminish a clear separation of during the removal of the supernatant layers [0019]. The case for prima facie obviousness has not been made. Therefore, Applicant asserts that the rejection of the Claims 3 and 4 under the statute is improper. Moreover, the rejections of Claims 3 and 4 are deemed moot since they depend from allowable Claim 1 as presently amended.

**CONCLUSION**

Applicants assert that this response is a good faith effort to place the application in condition for allowance. Applicants respectfully seek early allowance of the pending claims.

Respectfully submitted,

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